

dedicated LCD display solutions

User Manual 15" 4K 3480 x 2160 LCD



LCD-AP-K15 Aluminum front bezel



LCD-DP-K15 Aluminum front cover





LCD-OP-K15 Universal open frame

Legal Information

First English printing, September 2018

Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. We are not liable for any injury or loss that results from the use of this equipment.

Safety Instructions

Please read all of these instructions carefully before you use the device. Save this manual for future reference.

- Unplug equipment before cleaning. Don't use liquid or spray detergent; use a moist cloth.
- Keep equipment away from excessive humidity and heat. Preferably, keep it in an air-conditioned environment with temperatures not exceeding 40° Celsius (104° Fahrenheit).
- When installing, place the equipment on a sturdy, level surface to prevent it from accidentally falling and causing damage to other equipment or injury to persons nearby.
- When the equipment is in an open position, do not cover, block or in any way obstruct the gap between it and the power supply. Proper air convection is necessary to keep it from overheating.
- Arrange the equipment's power cord in such a way that others won't trip or fall over it.
- If you are using a power cord that didn't ship with the equipment, ensure that it is rated for the voltage and current labeled on the equipment's electrical ratings label. The voltage rating on the cord should be higher than the one listed on the equipment's ratings label.
- Observe all precautions and warnings attached to the equipment.
- If you don't intend on using the equipment for a long time, disconnect it from the power outlet to prevent being damaged by transient over-voltage.
- Keep all liquids away from the equipment to minimize the risk of accidental spillage. Liquid spilled on to the power supply or on other hardware may cause damage, fire or electrical shock.
- Only qualified service personnel should open the chassis. Opening it yourself could damage the equipment and invalidate its warranty.
- If any part of the equipment becomes damaged or stops functioning, have it checked by qualified service personnel.

What the warranty does not cover

- Any product, on which the serial number has been defaced, modified or removed.
- Damage, deterioration or malfunction resulting from:
 - Accident, misuse, neglect, fire, water, lightning, or other acts of nature, unauthorized product modification, or failure to follow instructions supplied with the product.
 - $\hfill\square$ Repair or attempted repair by anyone not authorized by us.
 - □ Any damage of the product due to shipment.
 - □ Removal or installation of the product.
 - $\hfill\square$ Causes external to the product, such as electric power fluctuation or failure.
 - □ Use of supplies or parts not meeting our specifications.
 - \Box Normal wear and tear.
 - □ Any other causes which does not relate to a product defect.
- Removal, installation, and set-up service charges.

Regulatory Notices Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

Any changes or modifications made to this equipment may void the user's authority to operate this equipment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-position or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Contents

< Part. 1 > LCD-AP-K15 / NAP-K15

1.1	Package Content	P.1
1.2	Structure Diagram & Dimension	P.2 - 3
1.3	Mounting Hardware & Installation	P.4 - 5

< Part. 2 > LCD-DP-K15

2.1	Package Content	P.6
2.2	Structure Diagram & Dimension	P.7 - 8
2.3	Mounting Hardware & Installation	P.9

< Part. 3 > LCD-OP-K15

3.1	Package Content	P.10
3.2	Structure Diagram & Dimension	P.11 - 12
3.3	Mounting Hardware & Installation	P.13

< Part. 4 > Specifications / OSD

4.1	Product Specifications	P.14 - 15
4.2	On-screen Display Operation (OSD)	P.16 - 18
4.3	Picture In Picture (PIP) / Picture By Picture (PBP)	P.19 - 20

< Part. 5 > Options

5.1	Option Table	P.21
5.2	Remote Controller (RC-2)	P.22
5.3	3G / HD / SD- SDI Broadcast-grade input	P.23
5.4	MCS Multi-display control solution	P.24
5.5	Touchscreen & driver	P.25 - 26
5.6	DC Power	P.26
5.7	MIL-type or lockable connector	P.27

Before Installation

- It is very important to mount the equipment in a suitable cabinet or on a stable surface.
- Make sure the place has a good ventilation, is out of direct sunlight, away from sources of excessive dust, dirt, heat, water, moisture and vibration.

Unpacking

The equipment comes with the standard parts shown in package content. Check and make sure they are included and in good condition. If anything is missing, or damaged, contact the supplier immediately.

How To Clean Your LCD Monitor

A Caution :

- To avoid the risk of electric shock, make sure your hands are dry before unplugging your monitor from or plugging your monitor into an electrical outlet.
- When you clean your monitor, do not press down on the LCD screen. Pressing down on the screen can scratch or damage your display. Pressure damage is not covered under warranty.
- Use only cleansers made specifically for cleaning monitors and monitor screens. Cleansers not made to clean monitors and monitor screens can scratch the LCD display or strip off the finish.
- Do not spray any kind of liquid directly onto the screen or case of your monitor. Spraying liquids directly onto the screen or case can cause damage which is not covered under warranty.
- Do not use paper towels or abrasive pads to clean your monitor. Using an abrasive pad or any wood based paper product such as paper towels can scratch your LCD screen.

Cleaning Your Monitor

To clean your LCD safely, please follow these steps :

- ① Disconnect the power cord.
- ② Gently wipe the surface using a clean, dry microfiber cloth. Use as little pressure as possible.

Cleaning Tough Marks and Smudges

To remove tough marks and smudges, please follow these steps :

- ① Disconnect the power cord.
- ② Spray a small amount of non-abrasive cleanser on a microfiber cloth.

Caution : Do not spray or apply any liquids directly onto the monitor. Always apply the solution to your microfiber cloth first, not directly on the parts you are cleaning.

- ③ Gently wipe the surface. Use as little pressure as possible.
- ④ Wait until your monitor is completely dry before plugging it in and powering it up.

< Part 1 > < 1.1 > Package Content - LCD-AP / NAP-K15 15" 4K LCD Display

LCD-AP-K15 / NAP-K15



15" 4K LCD Display X 1 6ft DP cable X1 Power adapter X1 Power cord X1

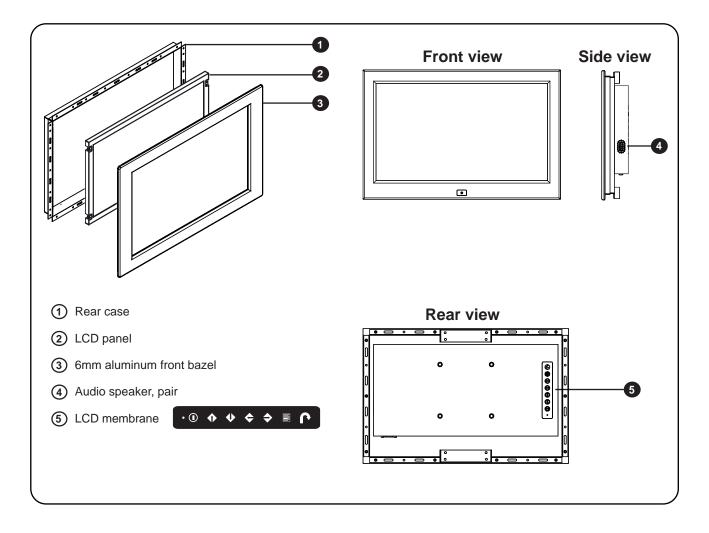
Mounting hardware X 1 pack

- Mounting bracket x 2 pcs
- M4* 6mm screw x 4 pcs
- M4* 50mm screw x 4 pcs

Basic I/O

		00	Audio	Power
HDMI 1.4	HDMI 2.0	DP [[]]	out	O
			9	

< 1.2 > Structure Diagram - LCD-AP / NAP-K15

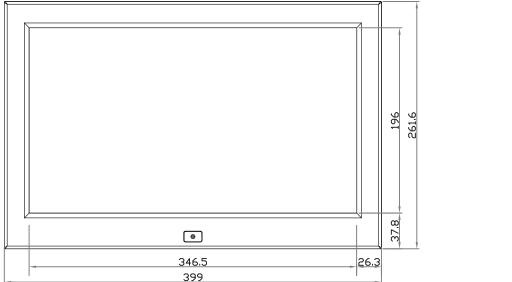


Model	Product Dimension	Packing Dimension	Net	Gross
	(W x D x H)	(W x D x H)	Weight	Weight
LCD-AP-K15	399 x 53.6 x 261.6 mm	615 x 113 x 523 mm	4.7 kg	7.3 kg
	15.7 x 2.1 x 10.3 inch	24.2 x 4.4 x 20.6 inch	10.3 lbs	16.1 lbs
LCD-NAP-K15	399 x 53.6 x 261.6 mm	615 x 113 x 523 mm	4.7 kg	7.3 kg
	15.7 x 2.1 x 10.3 inch	24.2 x 4.4 x 20.6 inch	10.3 lbs	16.1 lbs

< 1.2 > Dimension - AP / NAP-K15

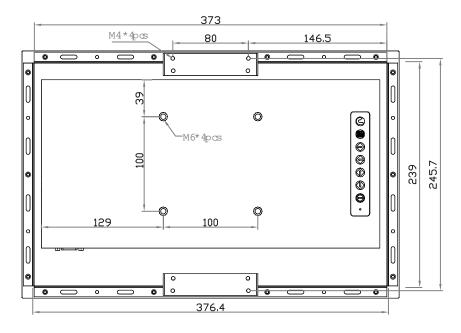
15" 4K LCD Display

Front View



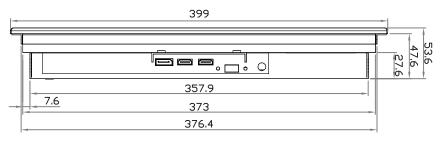
Side View

Rear View

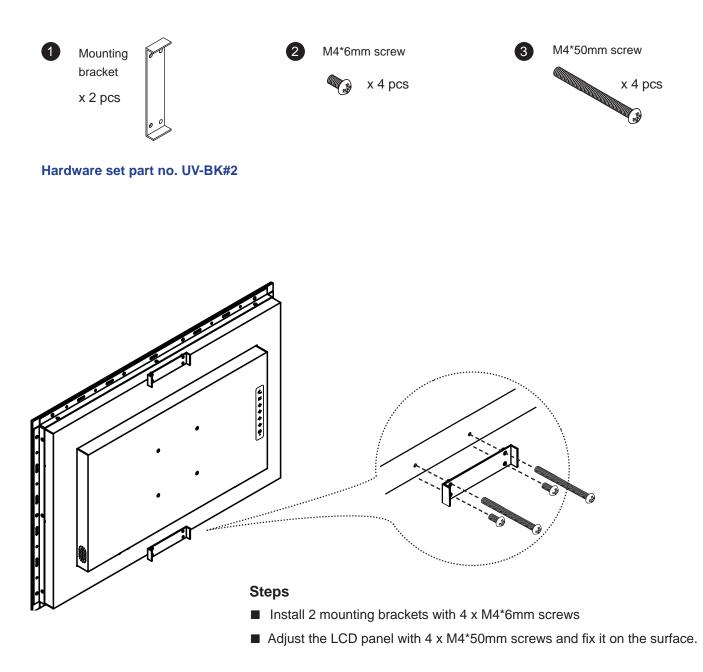


UNIT : mm 1mm = 0.03937 inch

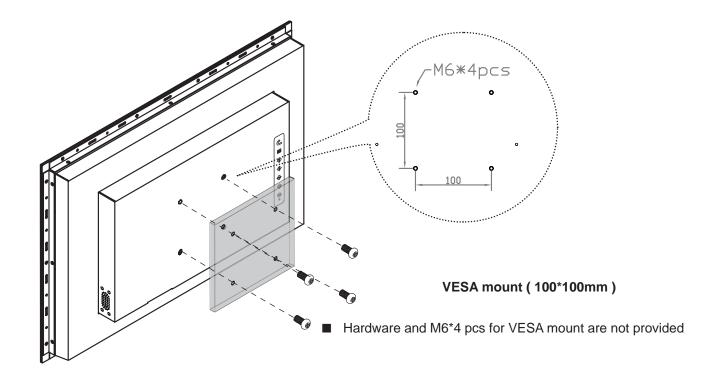
Bottom View



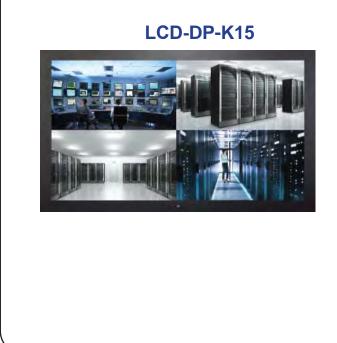
< 1.3 > Panel Mount Installation - LCD-AP / NAP-K15



< 1.3 > VESA mount Installation - LCD-AP / NAP-K15 15" 4K LCD Display



< Part 2 > < 2.1 > Package Content - LCD-DP-K15



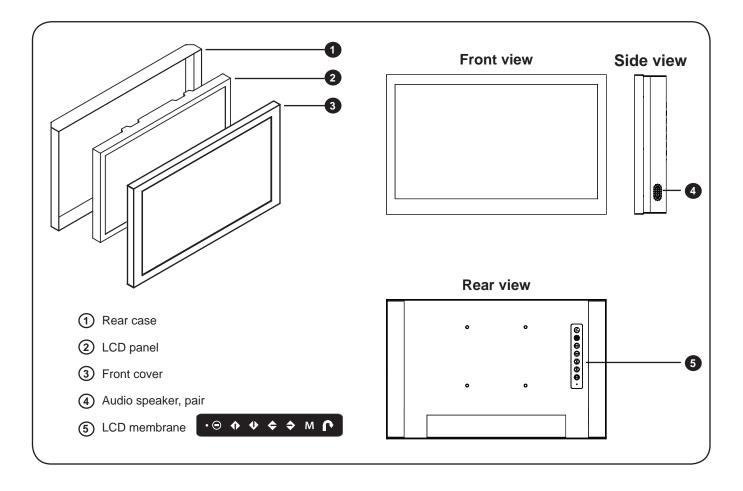
15" 4K LCD Display X 1 6ft DP cable X 1 Power adapter X 1 Power cord X 1

Basic I/O

HDMI 1.4 HDMI 2.0	DP	Audio	Power
		in out	O

15" 4K LCD Display

< 2.2 > Structure Diagram - LCD-DP-K15

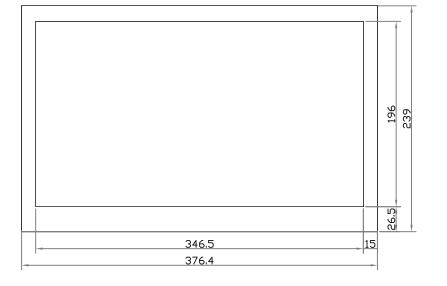


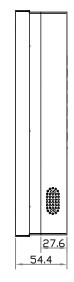
Model	Product Dimension	Packing Dimension	Net	Gross
	(W x D x H)	(W x D x H)	Weight	Weight
DP-K15	376.4 x 54.4 x 239 mm	615 x 113 x 523 mm	4.1 kg	6.7 kg
	14.8 x 2.1 x 9.4 inch	24.2 x 4.4 x 20.6 inch	9 lbs	14.7 lbs

< 2.2 > Dimension - LCD-DP-K15

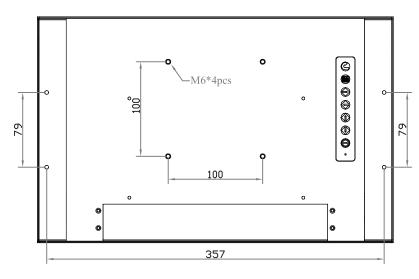
Front View

Side View



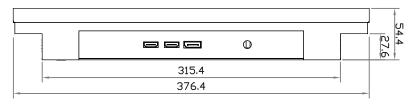


Rear View

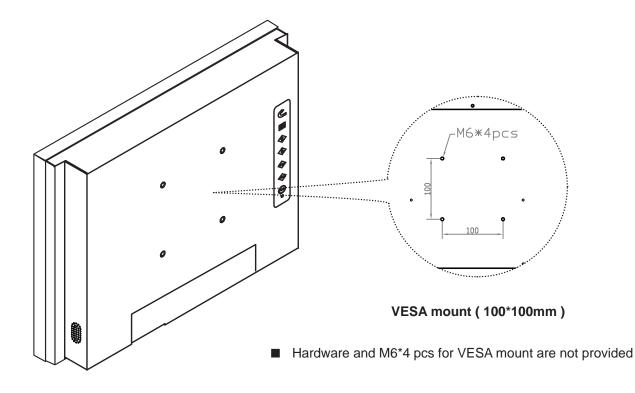


UNIT : mm 1mm = 0.03937 inch

Bottom View



< 2.3 > VESA Installation - LCD-DP-K15



< Part 3 > < 3.1 > Package Content - LCD-OP-K15

OP-K15

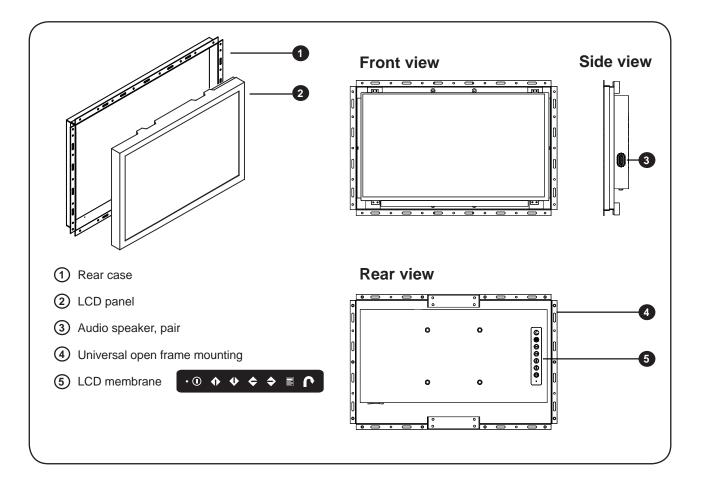


15" 4K LCD Display X 1 6ft DP cable X 1 Power adapter X 1 Power cord X 1

Basic I/O

HDMI 1.4 HDMI 2.0	DP	Audio	Power
	[]]]]	in out O O	O

< 3.2 > Structure Diagram - LCD-OP-K15

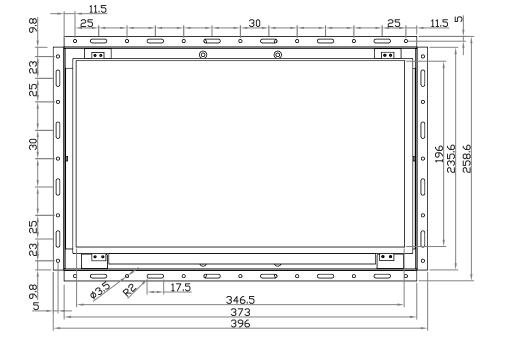


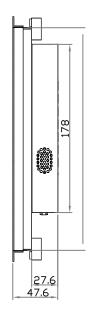
Model	Product Dimension	Packing Dimension	Net	Gross
	(W x D x H)	(W x D x H)	Weight	Weight
LCD-OP-K15	396 x 47.6 x 258.6 mm	615 x 113 x 523 mm	3.5 kg	6.1 kg
	15.9 x 1.9 x 10.2 inch	24.2 x 4.4 x 20.6 inch	7.7 lbs	13.4 lbs

< 3.2 > Dimension - LCD-OP-K15

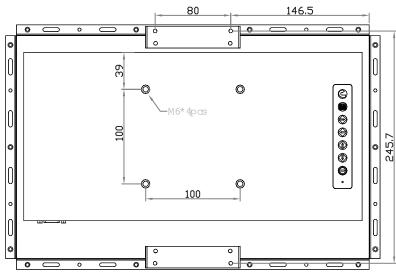
Front View

Side View





Rear View



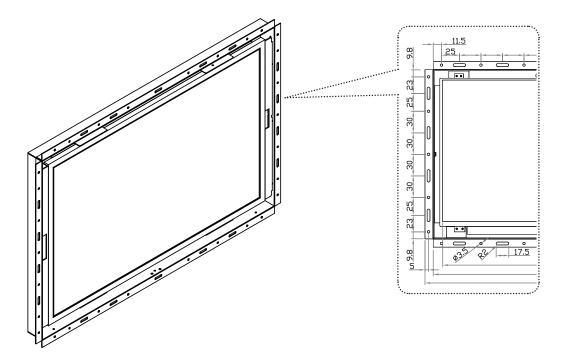
UNIT : mm 1mm = 0.03937 inch

Bottom View

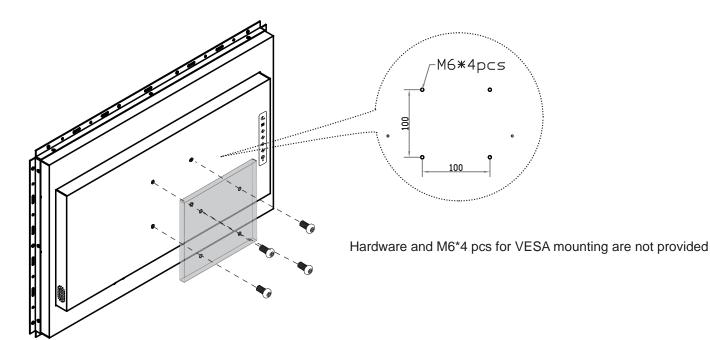
0			47.6
	357.9	7.6	-
	373		
	376.4		
-	396	- 11	_

< 3.3 > Installation - :CD-OP-K15

(I) Universal mount



(II) VESA mount (100*100mm)



< Part 4 > < 4.1 > Product Specifications

Mechanical Design		AP-K15	NAP-K15	DP-K15	OP-K15
	Protection	6mm front cover	NEMA 4 / IP 65	front cover	open frame
	Front Panel	Black, RAL 9005 -			
	Rear Casing	Black, RAL 9005			
	VESA Mounting		100 x 100n	nm	
	Other Mounting	Panel mount	Panel mount	-	Universal mount

LCD	Panel Size (diagonal)	15.6-inch Widescreen TFT color LCD
Panel	Display pixel (dots x lines)	3840 x 2160
	Brightness (typ.)	300
	Contrast Ratio (typ.)	800:1
	Color	16.7 M, 8-bit
	Viewing Angle (L/R/U/D)	89/89/89
	Response Time (ms)	30
	Dot pitch (mm)	0.0897
	Display Area (mm)	344.448H x 193.752V
	Surface treatment	Anti-glare
	Surface hardness	3H
	Backlight Type	LED
	MTBF (hrs)	20,000

Video	Digital	Display port	DP 1.2 / HDCP 1.3
		HDMI	HDMI 2.0 / HDCP 2.2
			HDMI 1.4 / HDCP 1.4

Audio	Audio Output	Connector	3.5mm stereo jack
		Resistance / Power level	30kΩ / 2.8V
	Speaker	Dual Stereo Speaker	2W x 2

*When the audio output is connected, speaker output is OFF

Power	Power Supply	Range	Auto-sensing 100 to 240VAC, 50 / 60Hz
	Power Consumption	Screen ON	Max. 24W
		Power saving mode	Max. 9W
		Power button OFF	Max. 2W

Compliance	EMC	FCC & CE certified
	Safety	CE / LVD certified
	Environment	RoHS2 & REACH compliant

< 4.1 > Product Specifications

15" 4K LCD Display

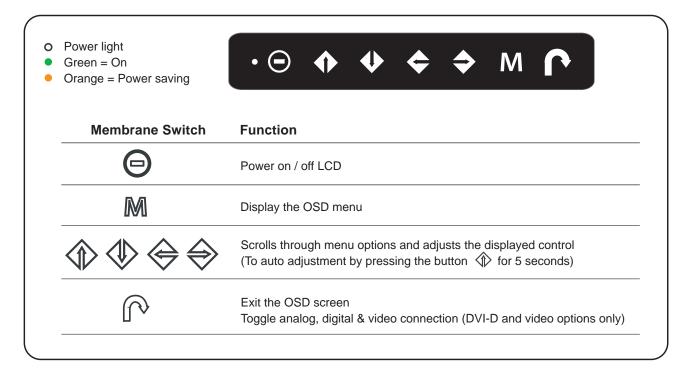
Environmental	Operating	Temperature	0 to 55°C degree
Conditions		Humidity	20~90%, non-condensing
		Altitude	16,000 ft
	Storage / Non-operating	Temperature	-20 to 60°C degree
		Humidity	5~90%, non-condensing
		Altitude	40,000 ft
		Shock	10G acceleration (11ms duration)
		Vibration	10~300Hz 0.5G RMS random vibration

Physical		LCD-AP/NAP-K15	LCD-DP-K15	LCD-OP-K15
Specification	Product (W x D x H)	399 x 53.6 x 261.6 mm	376.4 x 54.4 x 239 mm	396 x 47.6 x 258.6 mm
		15.7 x 2.1 x 10.3 inch	14.8 x 2.1 x 9.4 inch	15.9 x 1.9 x 10.2 imch
	Packing (W x D x H)	615 x 113 x 523 mm	615 x 113 x 523 mm	615 x 113 x 523 mm
		24.2 x 4.4 x 20.6 inch	24.2 x 4.4 x 20.6 inch	24.2 x 4.4 x 20.6 inch
	Net Weight	4.7 kg / 10.3 lb	4.1 kg / 9 lb	3.5 kg / 7.7 lb
	Gross Weight	7.3 kg / 16.1 lb	6.7 kg / 14.7 lb	6.1 kg / 13.4 lb

Applicable	Display Port	PC Signal	3840 x 2160 x 60Hz
Format	Input		1920 x 1080 x 60Hz
			1600 x 1200 x 60Hz
			1360 x 768 x 60Hz
			1280 x 1024 x 60 / 75Hz
			1280 x 768 x 60Hz
			1024 x 768 x 60 / 70 / 75Hz
			800 x 600 x 60 / 72 / 75Hz
			720 x 400 x 70Hz
			640 x 480 x 60 / 72 / 75Hz
		Audio Signal	2ch Linear PCM
	HDMI Input	HDMI 2.0	3840 x 2160 x 60Hz
		HDMI 2.0 / 1.4	3840 x 2160 x 30Hz
			1920 x 1080 x 50 / 60Hz (1080p)
			1920 x 1080 x 25 / 30Hz(1080i)
			1280 x 720 x 50 / 60Hz (720p)
			720 x 480 x 50 / 60Hz (576p / 480p)
		Audio Signal	2ch Linear PCM

* In some circumstances, if the user connects the LCD to PC via HDMI port for video and audio signals, the LCD may display incorrectly on a full screen. If so, please adjust the display card setting on display size to fix the issue.

< 4.2 > On-screen Display Operation (OSD)



< 4.2 > On-screen Display Operation (OSD)

1 Picture

2 Position

Brightness : Adjust the screen brightness

Contrast	: Adjust the difference between the image background
	(black level) and the foreground (white level)
Black level	: Adjust background black level of the screen

Eco : Screen in power saving mode

Picture size : Adjust the image size - Full Screen / 4:3 / 5:4 / Pixel to Pixel

DP version : Select the DP version

15" 4K LCD Display

		PICTURE	DP 3840x2160@60.0Hz
	BRIGHTNESS	-	70 >
←	CONTRAST	-	50 >
POSITION	BLACK LEVEL	-	<u> </u>
COLOR	ECO		STANDARD >
OSD SET			
RESET			
PIP			
MISC	▲/ ▼ : UP/DOWN	∢/ ▶: -	/+ MENU:EXIT M91KW430STD701LG

	۲		POSITION	DP 384	0x2160@60.01	Ηz
PICTU	RE	PICTURE SIZE		FULL	SCREEN	>
POSITI	►	DP VERSION			DP 1.2	>
COLC	DR					
osd s	♥ SET					
RESE	₽ ET					
PIP	>					
	c	▲/▼: UP/DOWN	∢/▶: -/+		MENU:EX 30STD7011	

3 Color

Color temperature	: User / Warm / Cool / 5400k mode and Red / Green / Blue color balance
Sharpness	: Adjust the image from weak to sharp
Hue	: Adjust the screen hue value
Saturation	: Adjust the saturation of the image color
Dynamic Iuminous control	: Control the dynamic brightness

	C	OLOR	DP 3840x2160@60.0H	z
PICTURE	COLOR TEMPERATURE		USER	>
+--+--+---------------------------	SHARPNESS		50	>
POSITION	HUE		50	>
	SATURATION		50	>
COLOR	DYNAMIC LUMINOUS CO	DNTROL	OFF	>
OSD SET				
07				
RESET				
PIP				
MISC	▲/ ▼ : UP/DOWN	∢/ ▶: -/+	MENU:EX M91KW430STD701L	

(4) OSD Set

Language	: Select the language in which the OSD menu is displayed - English
OSD H-Position	: Align the screen image left or right
OSD V-Position	: Align the screen image up or down
OSD time out	: Adjust the screen timeout
OSD transparency	: Adjust the screen transparency
OSD size	: Adjust the screen size - Normal / Small
OSD rotation	: Rotate the screen - 90° / 180° / 270°

	05	D SET	DP 3840x2160@60.0Hz
	LANGUAGE		
←∔→	OSD H-POSITION		50 >
POSITION	OSD V-POSITION		50 >
	OSD TIME OUT		60 >
COLOR	OSD TRANSPARENCY		0 >
	OSD SIZE		NORMAL >
OSD SET	OSD ROTATION		OFF >
RESET			
PIP			
MISC	▲/▼: UP/DOWN	∢/ ▶: −/+	MENU:EXIT M91KW430STD701LG

< 4.2 > On-screen Display Operation (OSD)

15" 4K LCD Display

5 Reset

Reset : Return the adjustment back to factory setting

- <u>`</u>		RESET	DP 3840x2160@60.0Hz
PICTURE	RESET		
←			
POSITION			
COLOR			
OSD SET			
RESET			
PIP			
MISC	▲/ ▼ : UP / DOWN	4/ ▶: - /+	MENU:EXIT M91KW430STD701LG

6 PIP

PIP mode	: Enter into PIP / PBP setting - PIP MODE / PBP 2WIN (Main screen + 1 sub screen) / PBP 3WIN (Main screen + 2 sub screen) / PBP 4WIN (Main screen + 3 sub screen) Select the signal input of each sub screen
PIP size	: Adjust the size of the Sub screen - Small / Medium / Large / Huge
PIP position	: Adjust the position of the Sub screen - Top Left / Top Right / Bottom Left / Bottom Right
Swap	: Swap the input signal of PIP / PBP sub screen

		PIP	DP 3840x2160@60.	0Hz
PICTURE	PIP MODE		PIP MODE	>
← } →	WINDOW2 INPUT		HDMI2	>
POSITION	WINDOW3 INPUT		HDMI1	
	WINDOW4 INPUT		DP	>
COLOR	PIP SIZE		MEDIUM	>
+	PIP POSITION		TOP LEFT	>
OSD SET	SWAP			
RESET				
PIP				
MISC	▲/▼: UP/DOWN	∢/ ▶: -/+	MENU:E M91KW430STD701	

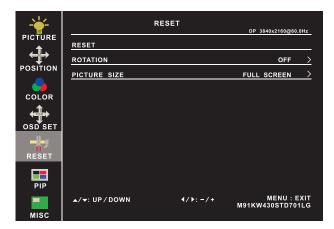
7 MISC

Signal source	e : Select the signal source - DP / HDMI1 / HDMI2
Mute	: Turn off the surrounding sound
Audio in	: Auto / Line in / DP
Volume	: Adjust the volume of sound
Sleep mode	: Set the off time - 10 min / 20 min / 30 min / 50 min / 60 min / 120 min / 240 min

		MISC	DP 3840x2160@60.0Hz	
	SIGNAL SOURCE		DP >	
←	MUTE		0FF >	
POSITION	AUDIO IN		AUTO >	
	VOLUME		<u> </u>	
	SLEEP MODE		<u> </u>	
OSD SET				
RESET				
PIP				
MISC	▲/▼: UP/DOWN	∢/ ▶: -/+	MENU:EXIT M91KW430STD701LG	

Options on Reset page

- Rotation : Rotate the image in Full screen or 1:1 -90° / 180° / 270°
- Picture size : Adjust the image size in Full screen or 1:1

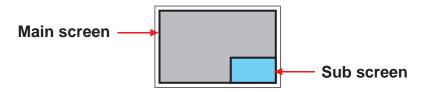


< 4.3 > How to Use Picture In Picture (PIP) / Picture By Picture (PBP)

< 4.3.1 > Picture in Picture (PIP)

Mode

Display the Sub screen in the Main screen. OSD Menu \rightarrow MISC \rightarrow PIP Mode \rightarrow Large / Small / OFF

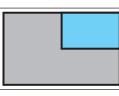


Position

Adjust the position of the Sub screen (top left, bottom left, top right, bottom right) OSD Menu \rightarrow MISC \rightarrow PIP Position \rightarrow top left / top right / bottom left / bottom right



top left



top right



bottom left



bottom right

Size

Adjust the size of the Sub screen (Large / Small) OSD Menu \rightarrow MISC \rightarrow PIP Mode \rightarrow Large / Small

Size of Sub screen

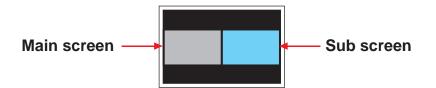
LCD Monitor	Large Sub screen	Small Sub screen
1920 x 1200	552 x 414	480 x 360
1920 x 1080	552 x 414	480 x 360
1440 x 900	414 x 310	360 x 270
1366 x 768	392 x 294	340 x 254
1280 x 1024	368 x 276	320 x 240

< 4.3 > How to Use Picture In Picture (PIP) / Picture By Picture (PBP)

< 4.3.2 > Picture By Picture (PBP)

Mode

Display the Sub screen next to the Main screen. OSD Menu \rightarrow MISC \rightarrow PIP Mode \rightarrow PBP



Size

LCD Monitor	Main / Sub screen
1920 x 1200	955 x 716
1920 x 1080	955 x 716
1440 x 900	715 x 536
1366 x 768	678 x 508
1280 x 1024	635 x 476

< 4.3.3 > PIP / PBP Source

To select an input signal for PIP / PBP Sub screen. OSD Menu \rightarrow MISC \rightarrow PIP Source \rightarrow HDMI / SDI

The PIP / PBP is operable in the following table :

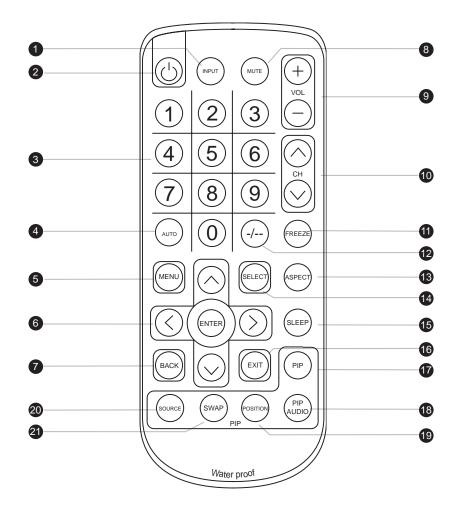
Sub Main	HDMI	SDI
HDMI	Х	0
SDI	0	х



< 5.1 > Option Table

Options	AP / NAP	DP	ОР
Remote controller	✓	✓	✓
SDI	✓	✓	✓
MCS multi-screen control	✓	✓ <i>✓</i>	✓
Touchscreen	✓	✓ <i>✓</i>	✓
MIL-type / lockable connector	✓	✓	✓
DC Power	✓	✓	✓

< 5.2 > Remote Controller (RC-2)



② Ů Switches on or off the TV ③ 0 - 9 Only use in TV mode. Select channels. For channel numbers 10 and above, enter the second digit within two seconds. ④ AUTO Auto adjust ⑤ MENU Display the menu on the screen or go to the previous menu ⑥ ▲ /▼ / ◀ / ▶ / ENTER Go to the upper menu or select the previous value / Go to the next menu or select the next value / Decrease the setting value or enter to the select item setting Enter to the select item settings or excude the setting ⑦ BACK Back to previous value ⑧ MUTE Turn on or off the speaker ⑨ Vol + / - Increase or decrease the speaker volume ⑩ CH + / - For TV model only, increase or decrease the channel number 10 FREEZE Reserve for OEM model 10 - / For setting input single or double digits 13 ASPECT Adjust the screen size 14 SELEEP Select the sleeping time 15 SLEEP Select the sleeping time	1	INPUT	Select the source		
③ 0 - 9 and above, enter the second digit within two seconds. ④ AUTO Auto adjust ⑤ MENU Display the menu on the screen or go to the previous menu ⑥ ▲ /▼/ ◀/▶ / ENTER Go to the upper menu or select the previous value / Go to the next menu or select the next value / Decrease the setting value / Increase the setting value / Increase the setting value or enter to the select item setting Enter to the select item settings or excude the setting ⑦ BACK Back to previous value ⑧ MUTE Turn on or off the speaker ⑨ Vol + /- Increase or decrease the speaker volume 10 CH + / - For TV model only, increase or decrease the channel number 11 FREEZE Reserve for OEM model 12 - / For setting input single or double digits 13 ASPECT Adjust the screen size 14 SELECT To select the existing item 15 SLEEP Select the sleeping time	2	Ċ	Switches on or off the TV		
(5) MENU Display the menu on the screen or go to the previous menu (6) ▲ /▼/▲/▶ / ENTER Go to the upper menu or select the next value / Go to the next menu or select the next value / Decrease the setting value or enter to the select item setting Enter to the select item settings or excude the setting (7) BACK Back to previous value (8) MUTE Turn on or off the speaker (9) Vol + / - Increase or decrease the speaker volume (10) CH + / - For TV model only, increase or decrease the channel number (11) FREEZE Reserve for OEM model (12) - / For setting input single or double digits (13) ASPECT Adjust the screen size (14) SELECT To select the existing item (15) SLEEP Select the sleeping time	3	0 - 9			
Image: Second Provided HTML Provided HTM	4	AUTO	Auto adjust		
Image: Select the set of the select the selec	5	MENU	Display the menu on the screen or go to the previous menu		
Image: Second	6	▲ / ▼ / ◀ / ► / ENTER	Go to the next menu or select the next value / Decrease the setting value / Increase the setting value or enter to the select item setting		
③ Vol + / - Increase or decrease the speaker volume ① CH + / - For TV model only, increase or decrease the channel number ① FREEZE Reserve for OEM model ② - / For setting input single or double digits ③ ASPECT Adjust the screen size ① SELECT To select the existing item ⑤ SLEEP Select the sleeping time	7	BACK	Back to previous value		
10 CH + / - For TV model only, increase or decrease the channel number 11 FREEZE Reserve for OEM model 12 - / For setting input single or double digits 13 ASPECT Adjust the screen size 14 SELECT To select the existing item 15 SLEEP Select the sleeping time	8	MUTE	Turn on or off the speaker		
1 FREEZE Reserve for OEM model 1 -/ For setting input single or double digits 1 ASPECT Adjust the screen size 1 SELECT To select the existing item 1 SLEEP Select the sleeping time	9	Vol + / -	Increase or decrease the speaker volume		
12 - / For setting input single or double digits 13 ASPECT Adjust the screen size 14 SELECT To select the existing item 15 SLEEP Select the sleeping time	10	CH + / -	For TV model only, increase or decrease the channel number		
13 ASPECT Adjust the screen size 14 SELECT To select the existing item 15 SLEEP Select the sleeping time	11	FREEZE	Reserve for OEM model		
14 SELECT To select the existing item 15 SLEEP Select the sleeping time	12	- /	For setting input single or double digits		
Image: Select the sleeping time	13	ASPECT	Adjust the screen size		
	14	SELECT	To select the existing item		
18 FXIT Exit the menu or cancel	15	SLEEP	Select the sleeping time		
	16	EXIT	Exit the menu or cancel		

PIP functions

$\overline{\mathbf{D}}$	PIP	Picture in picture
18	PIP AUDIO	To set the audio of in PIP mode
19	POSITION	To set the screen position in PIP mode
0	SOURCE	PIP Source
21	SWAP	Swap screen in PIP mode

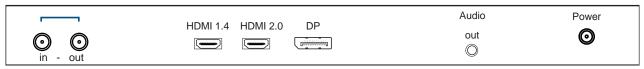
< 5.3 > Options : 3G / HD / SD-SDI input



Crystal Image SDI input is an ideal solution for the broadcastgrade video and high resolution CCTV market.

Designed for use with UltraView displays, a SDI input module can support up to 1080p @60Hz resolution without using additional space or power and it comes standard with a 2-year warranty.

SDI



INPUT	3G-SDI IN	BNC x 1 / 0.8Vp-p (75 ohm)
	3G-SDI OUT	BNC x 1 / Active through, equalized & relocked

Standard Compliance	Video	SMPTE 425M / 274M / 296M / 125M ITU-R BT.656		
	Audio	SMPTE 299M / 272M-C		

Compatible Video Format	3G-SDI	1080p 1080p 1080i 720p	@60 / 50Hz, 4:2:2 @30 / 25 / 24Hz, 4:4:4 @60 / 50Hz, 4:4:4 @60 / 50Hz, 4:4:4
	HD-SDI	1080p 1080i 720p	@30 / 25 / 24Hz, 4:2:2 @60 / 50Hz, 4:2:2 @60 / 50Hz, 4:2:2
	SD-SDI	480i	@60Hz, 4:2:2
	ITU-R BT.656	576i	@50Hz, 4:2:2

Compatible Audio Format	3G-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video
	HD-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized Video
	SD-SDI	48kHz, 16 / 20 / 24 bit, 2 CH, Synchronized / Asynchronized Video

Max. Transmission Distance 75 ohm coaxial cable	3G-SDI	150m at 2.97Gb/s	
	HD-SDI	250m at 1.485Gb/s	
	SD-SDI	480m at 270Mb/s	

< 5.4 > Options : MCS

MCS (Multi-display Control)

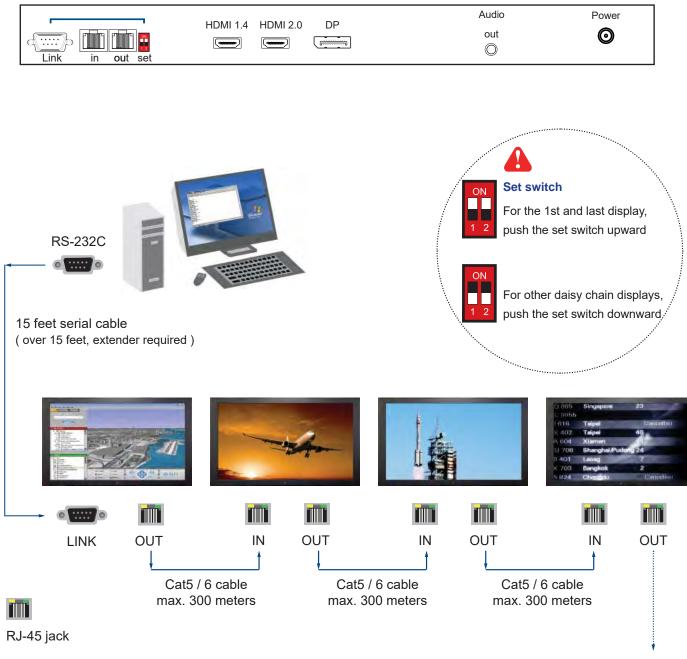


MCS

More control is always good. Especially when it is necessary and easy. Crystal Image provides MCS solution to control the **OSD** of various Industrial LCD displays up to 64 units.

The RS-232C is used for the communication between the PC and the first display via a 15 feet serial cable while the CAN bus is used for the various LCD displays cascade together via CAT 5/6 cable, and daisy chain up to 1,000 meters.

Designed for use with CIT LCD displays, Crystal Image provides a MCS input module without using additional space or power and it comes standard with a 2-year warranty.



Daisy chain up to 1,000 meters and 64 displays

up to 64 displays

< 5.5 > Options : Touchscreen & driver



Model	TPC-10 Multi-touch	TRB e-Resistive	
Technology	Projected Capacitive 5-Wire Resistive		
Touch Point	10	Single	
Input Type	Finger or Capacitive Stylus	Finger or Stylus	
Resolution	4096 x 4096	2048 x 2048	
Touch Point Accuracy	± 2 mm	-	
Response Speed	< 5 ms	15 ms	
Activation Force	< 5 g	≤ 50 g	
Surface Hardness	6H	3Н	
ight Transmission > 85%		80% ± 3%	
Haze	3% ↓	8% ± 3%	
Durability	50 million touches	10 million touches	
Top Layer	3 mm Glass	ITO Film	
Bottom Layer	0.7 mm Sensor Glass ITO Glass		
Thickness	3.9 ± 0.1 mm	2.2 ± 0.2 mm	
Connector	USB	USB Type A	
Compatibility Linux / Android / Windows / Mac		Windows 7 / XP / Vista, Linux	

K15" USB Touchscreen Specification

- Dimension will be changed if Multi-touch required
- USB touchscreen package includes 1 x 6ft USB cable, quick reference guideline and CD disc
- For detailed information, please refer to the attached CD disc
- As the touchscreen unit is not made of toughened glass, please handle it carefully

USB Touchscreen



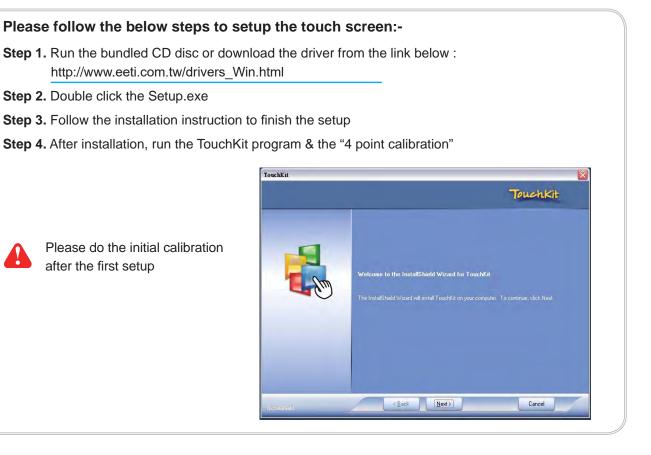
< 5.5 > Options : Touchscreen & driver



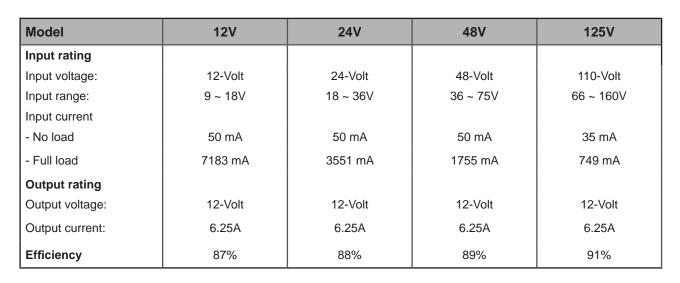
K15TPC-10 Driver

Connect the USB cable from the USB port on the LCD to a computer. The touch screen supports easy Plug-and-Play operations. There is no need to install additional drivers on the computer.

TRB Driver



< 5.6 > Options : DC Power



 $\circ \oplus \oplus \circ$

******* For DC power option :

may be required (1) If the unit with LCD, earthing

< 5.7 > Options : MIL-type or Lockable Connector

	Input	Part no).	MIL Standard
MIL - type Connector	DC Power *** (Male)	MS3470W8-33P		MIL - DTL - 26482
	VGA *** (Male)	MS3470W14-15P	The second secon	MIL - DTL - 26482

*** There are several additional MIL DC and VGA connector types with varying design characteristics to meet cost considerations and to provide users with the most design flexibility possible. For more information, please contact us.

	Input	Part no.	Standard
Lockable Connector	DC Power (Male)	YM-Ext-461CP001	D-type 3W3
	USB	LUSB - A111 - 00	-

*** MIL - type or Lockable connectors above can be integrated with our LCD displays. Sale service just for connectors not provided.

The company reserves the right to modify product specifications without prior notice and assumes no responsibility for any error which may appear in this publication.

All brand names, logo and registered trademarks are properties of their respective owners.